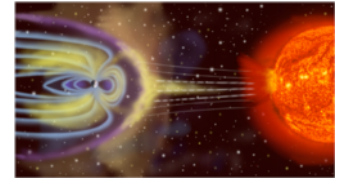
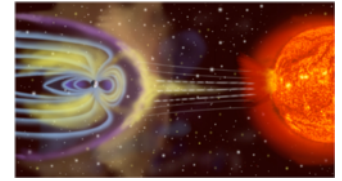


Auroral Wind in the Magnetosphere

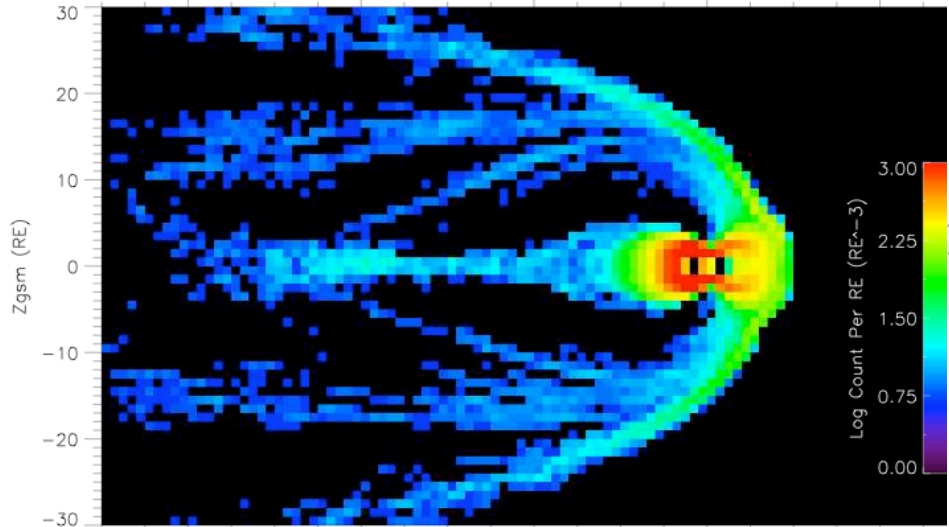


- Inputs
 - Dayside oval emits $1\text{e}9\text{ cm}^{-2}\text{ s}^{-1}\text{ O}^+$ at 0 - 10s eV
 - Hourly $\Delta(\text{Pd}) \sim 1\text{ nPa}$ per Moore et al., 1999.
 - Nightside oval emits $1\text{e}8\text{ cm}^{-2}\text{ s}^{-1}\text{ O}^+$ at 0 - few keV
 - These fluxes could be much lower but would rarely be higher
 - They tend to be in this ratio except for Alfvénic aurora near the nightside polar cap boundary, which match dayside flux
- Outputs
 - Peak density to 10 cm^{-3} , vs 1 cm^{-3} for polar wind or solar wind.
 - Peak pressure to 100 nPa, vs 3 for solar wind or 0.3 for polar wind
 - Dayside outflow contributions dominate density and pressure
 - NBz stops upstream escape over poles

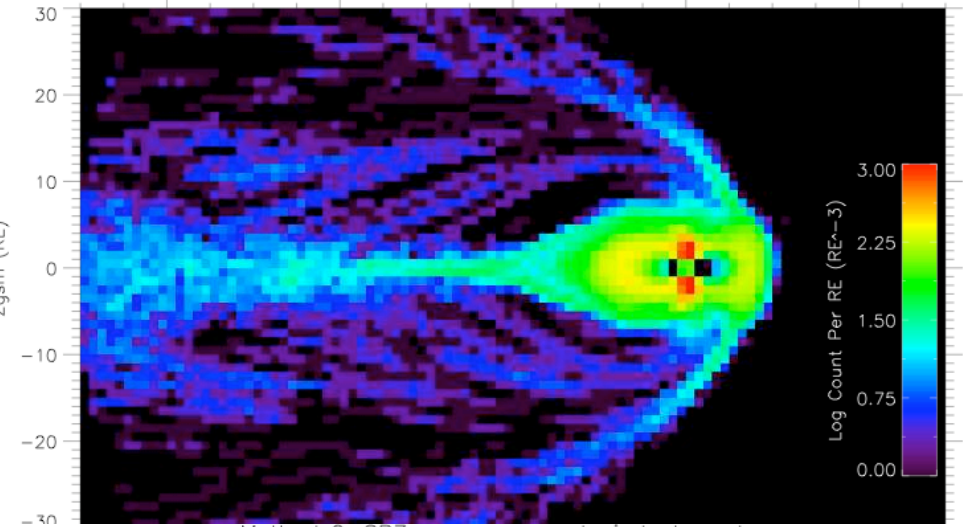
SBz Night / Day Sampling



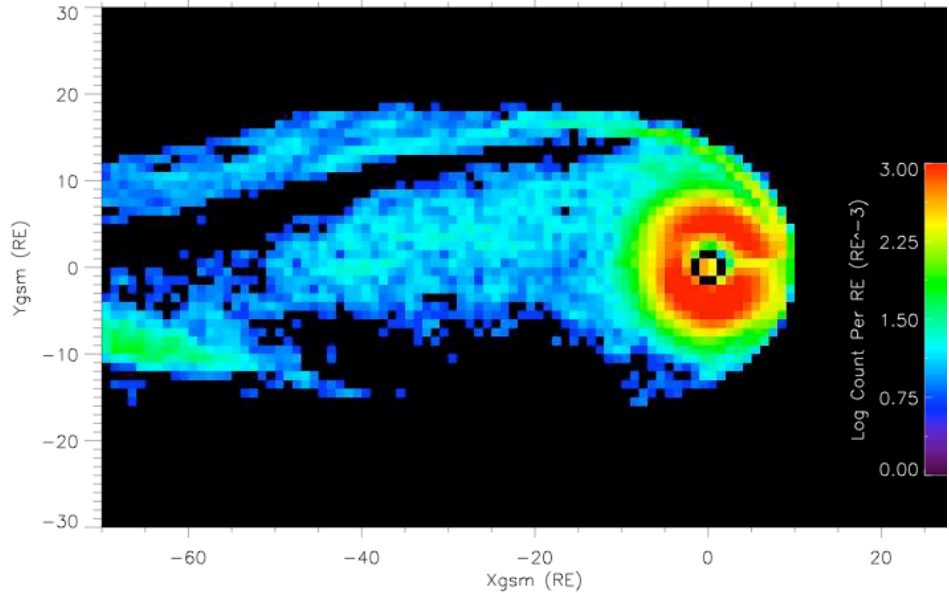
Method 2, SBZ oxygen auroral wind, night release
Y= 0 plane



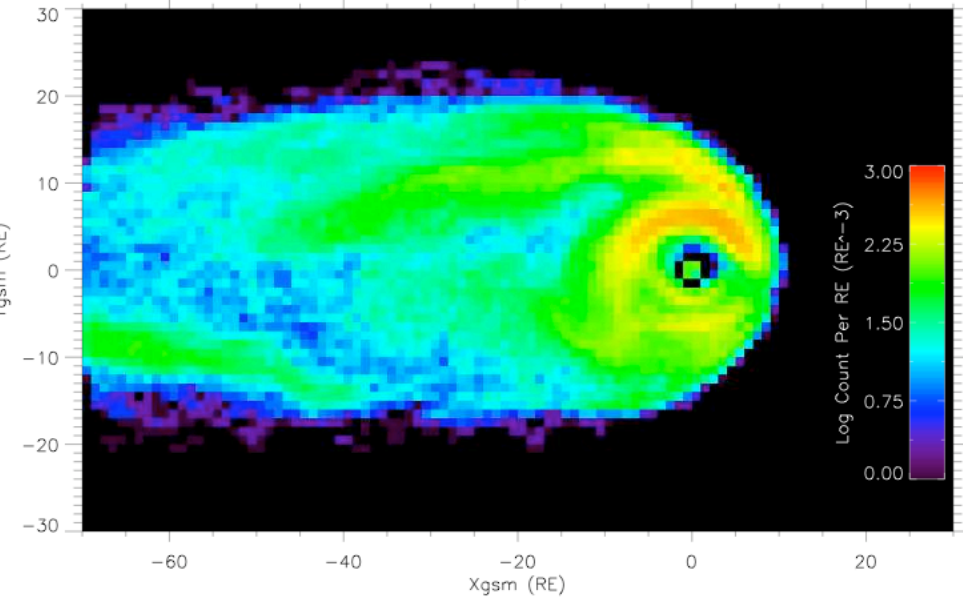
Method 2, SBZ oxygen auroral wind, day release
Y= 0 plane



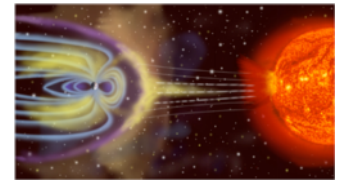
Method 2, SBZ oxygen auroral wind, night release
Z= 0 plane



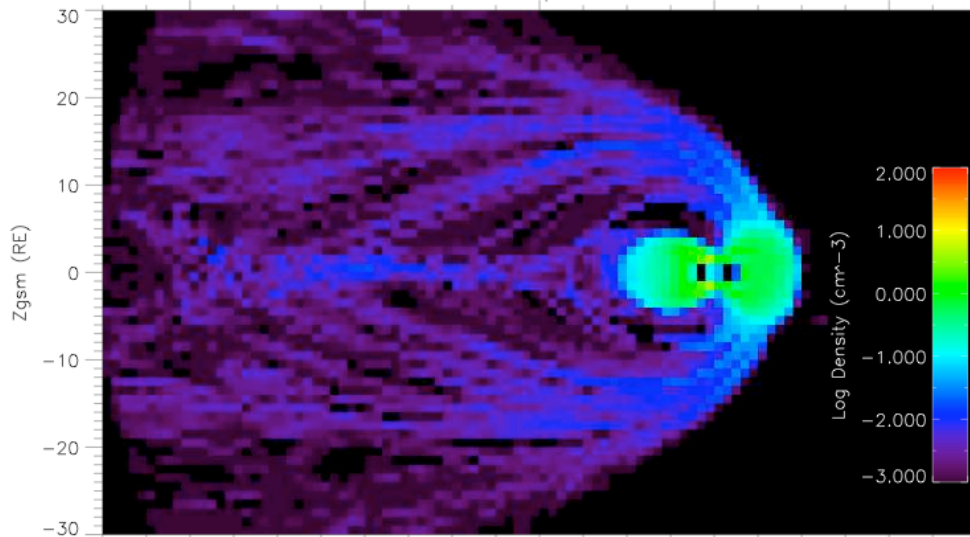
Method 2, SBZ oxygen auroral wind, day release
Z= 0 plane



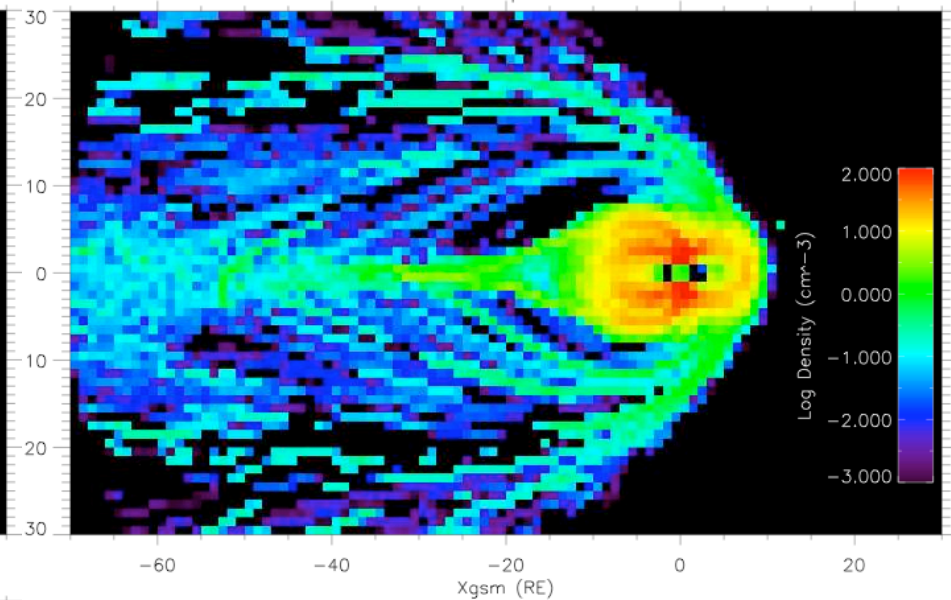
SBZ Night / Day Release Density



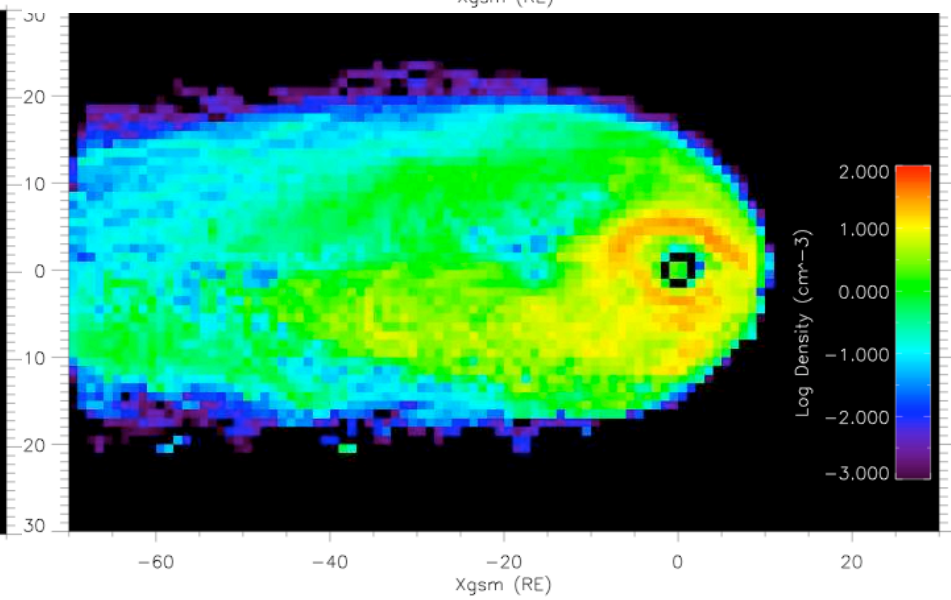
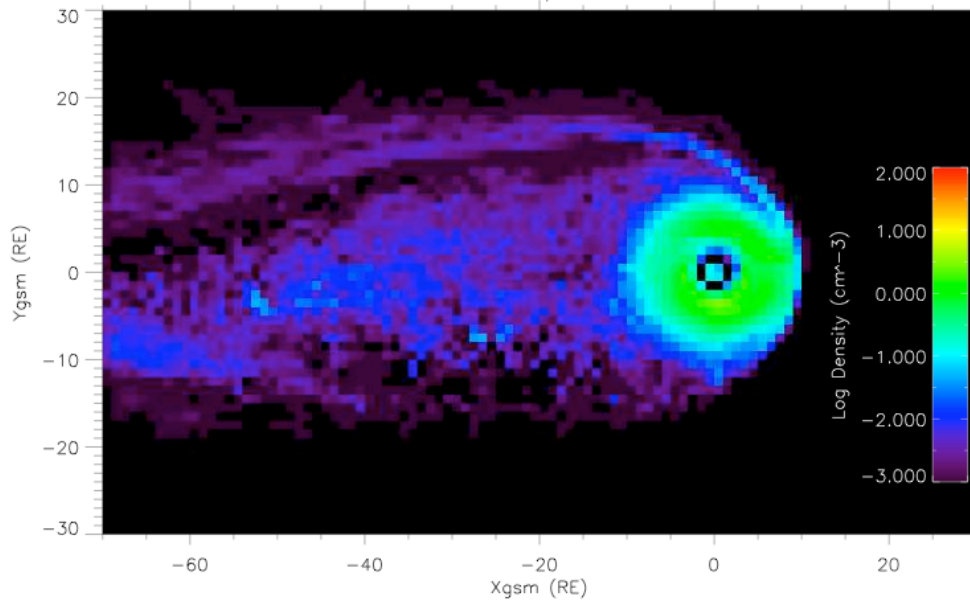
SBZ oxygen auroral wind, night particles
Y= 0 plane



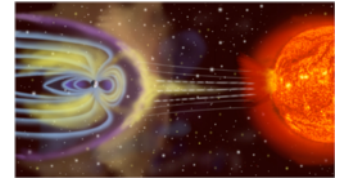
SBZ oxygen auroral wind, day particles
Y= 0 plane



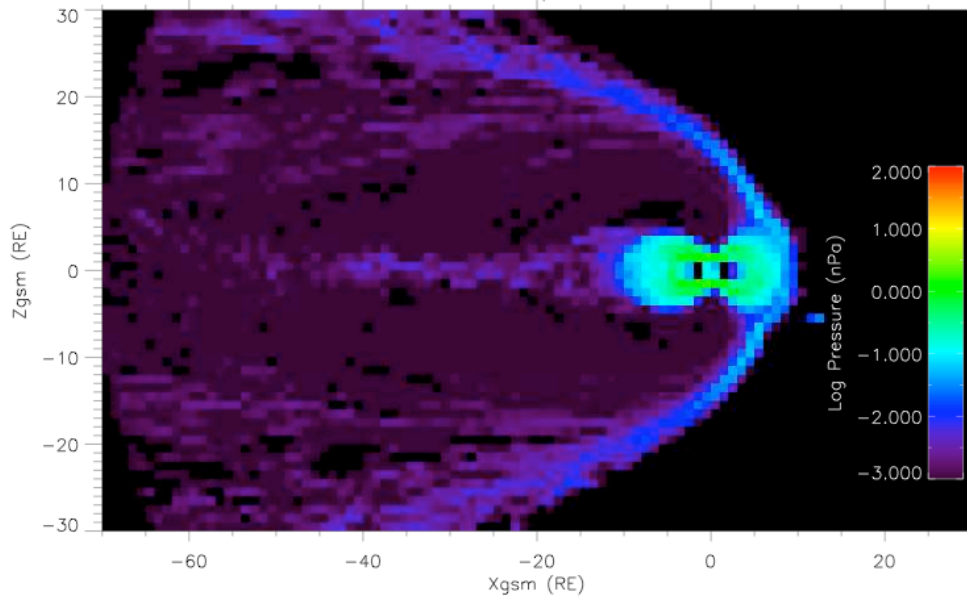
SBZ oxygen auroral wind, night particles
Z= 0 plane



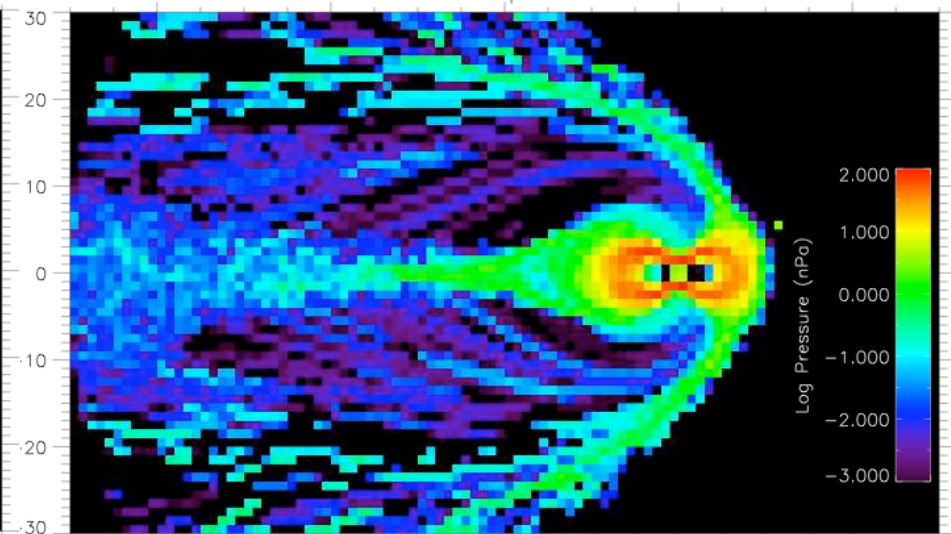
SBz Night / Day Release Pressure



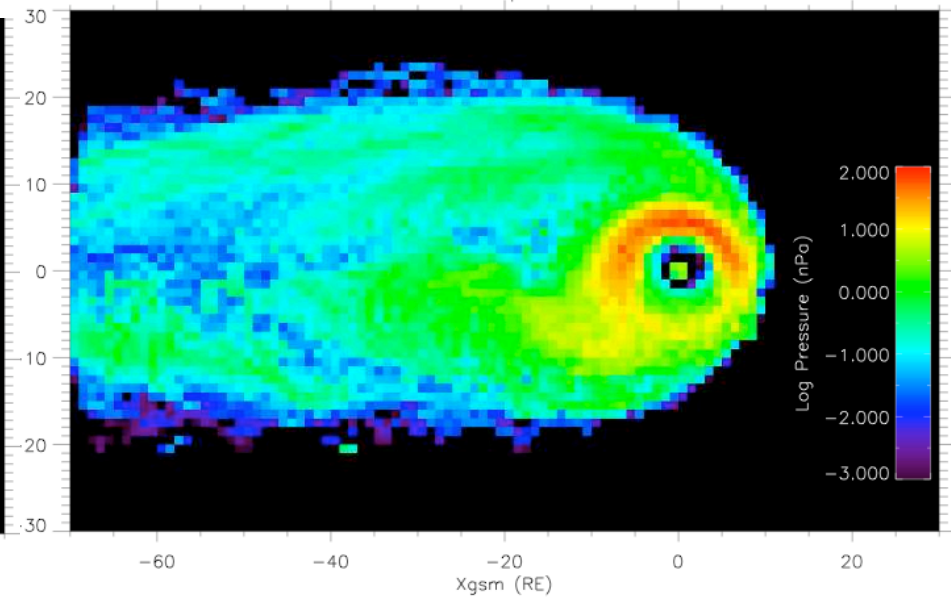
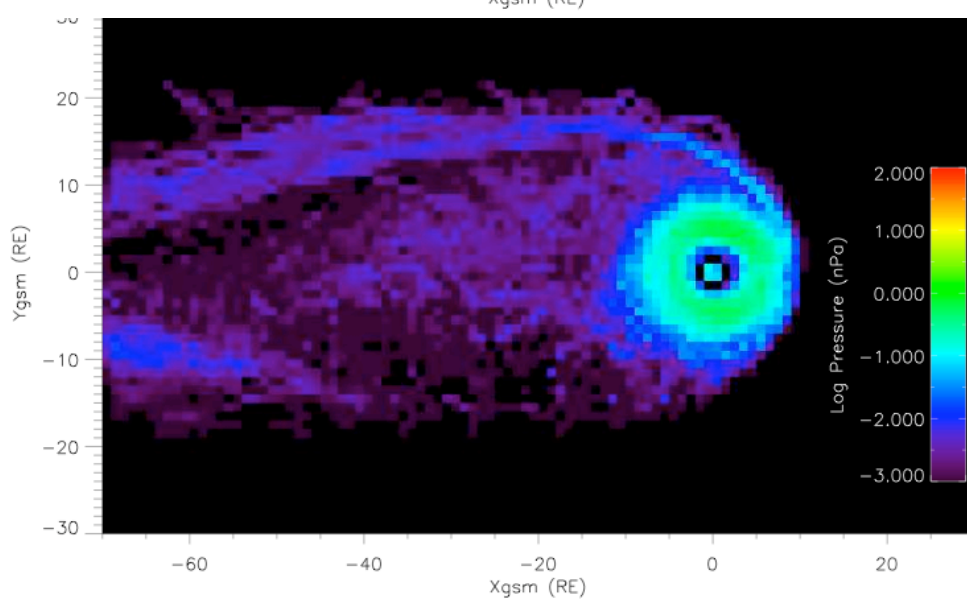
SBZ oxygen auroral wind, night particles
Y= 0 plane



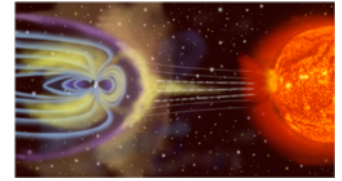
SBZ oxygen auroral wind, day particles
Y= 0 plane



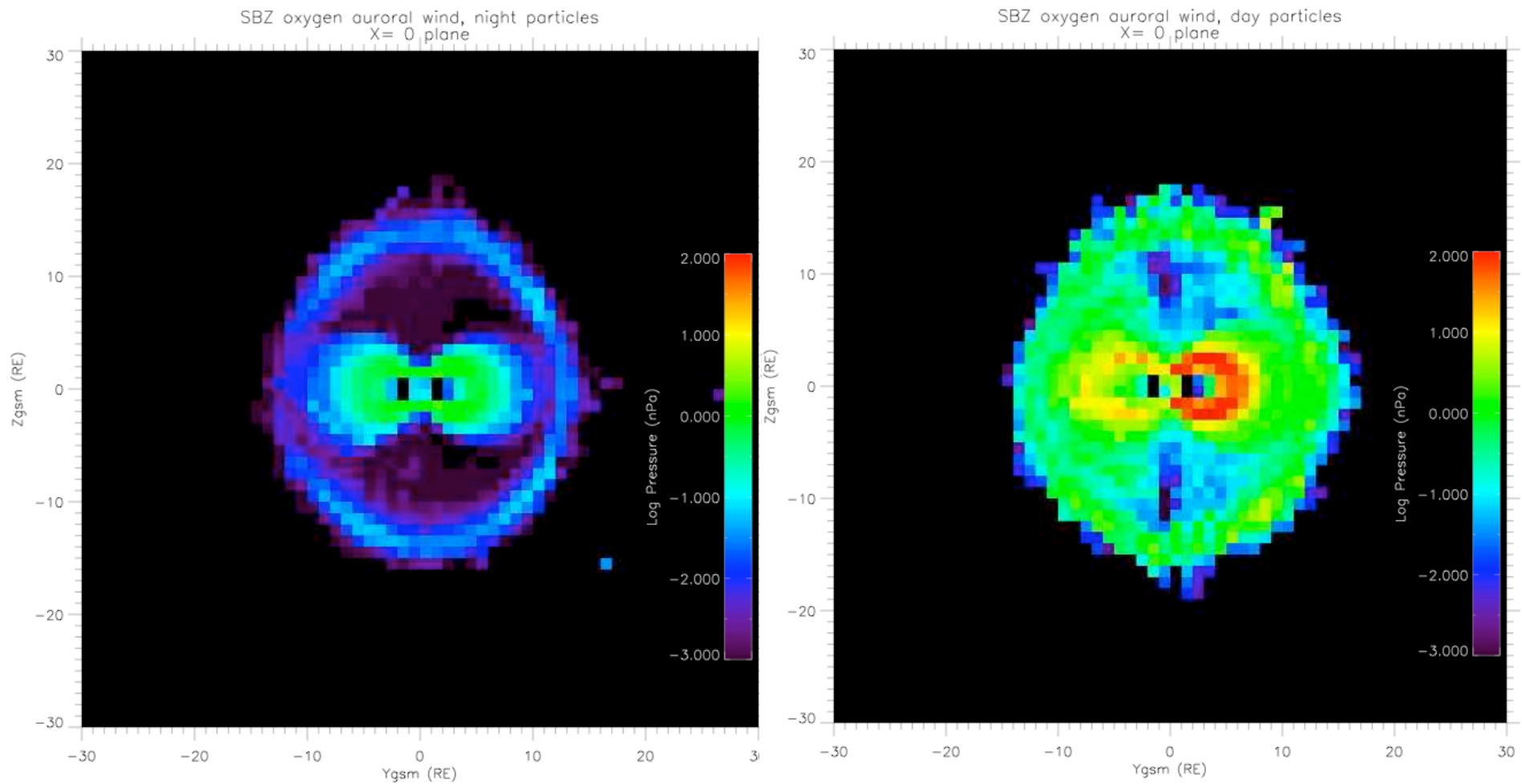
SBZ oxygen auroral wind, day particles
Z= 0 plane



SBz Night / Day Release Pressure

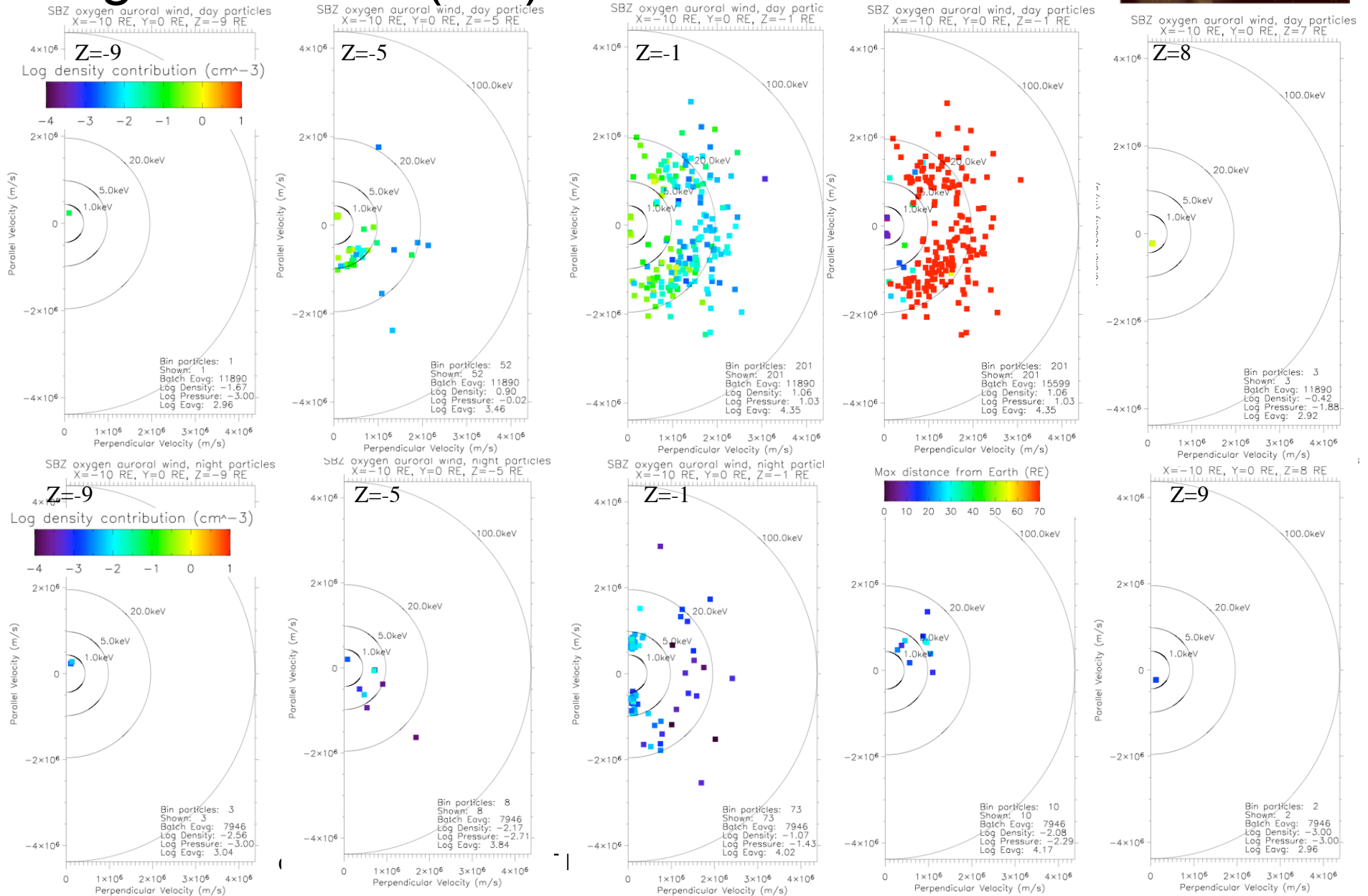
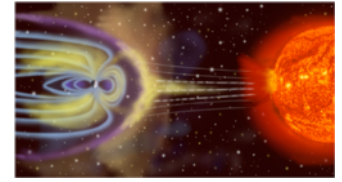


- Dayside reconnection produced high latitude magnetosheath of both source populations (night and day)
- Day source dominates both density and pressure.



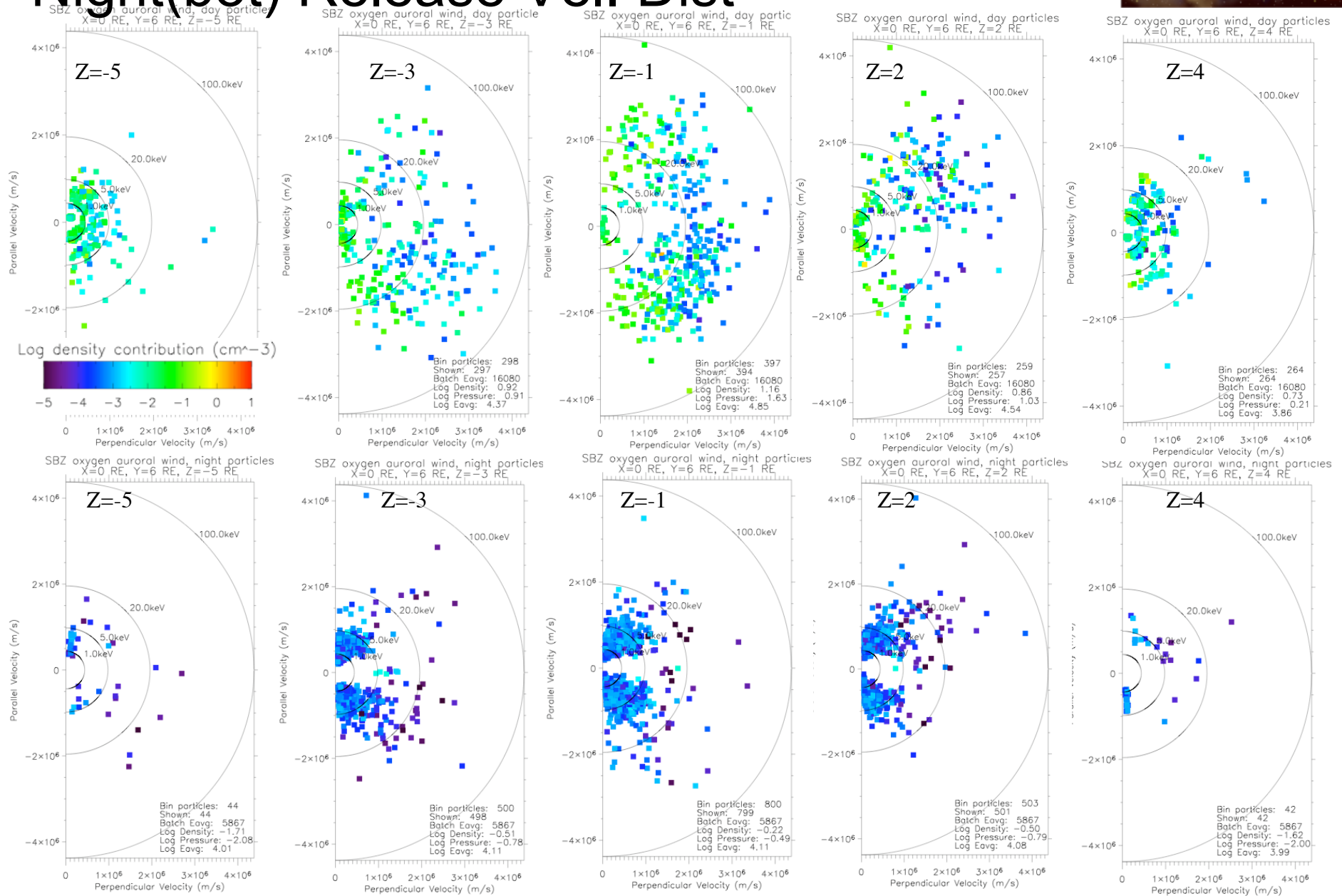
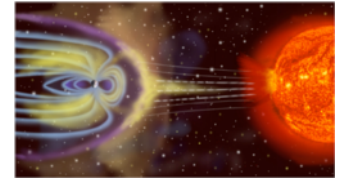
Day Release (top) Vel. Dist X,Y=-10,0

Night Release (bot) Vel. Dist

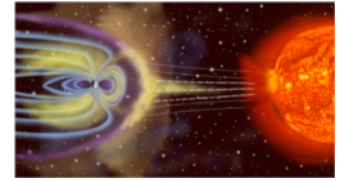


Day (top) Release Vel. Dist at X,Y= 0,6

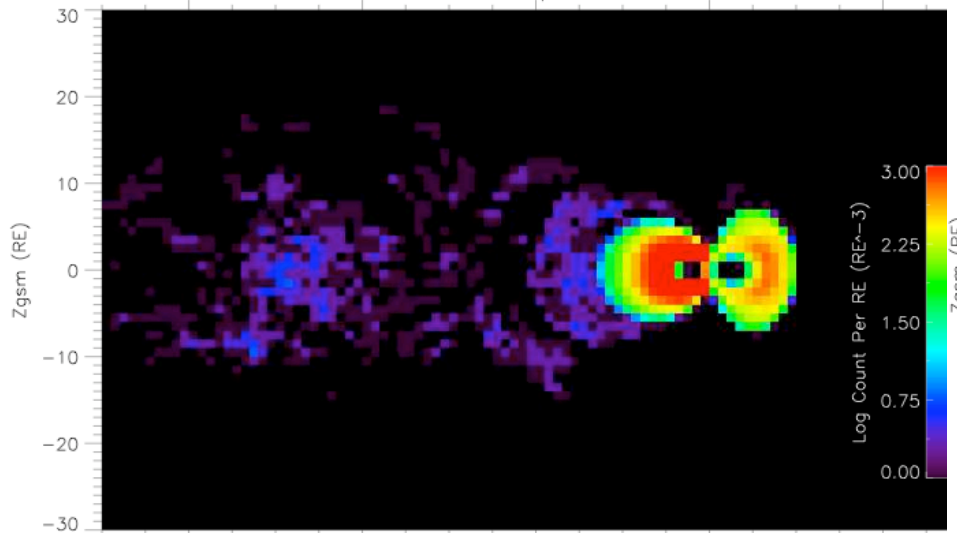
Night(bot) Release Vel. Dist



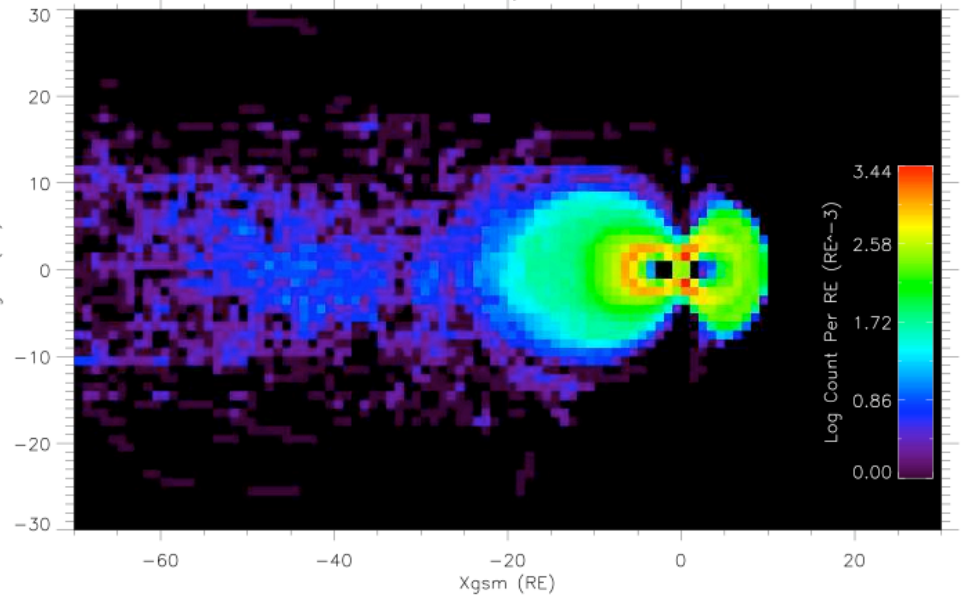
NBz Night / Day Sampling



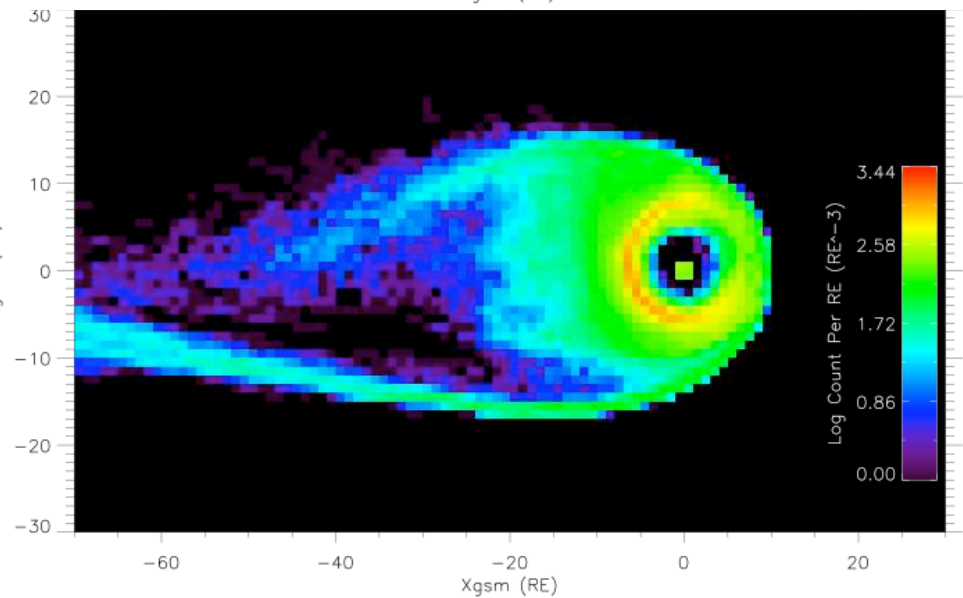
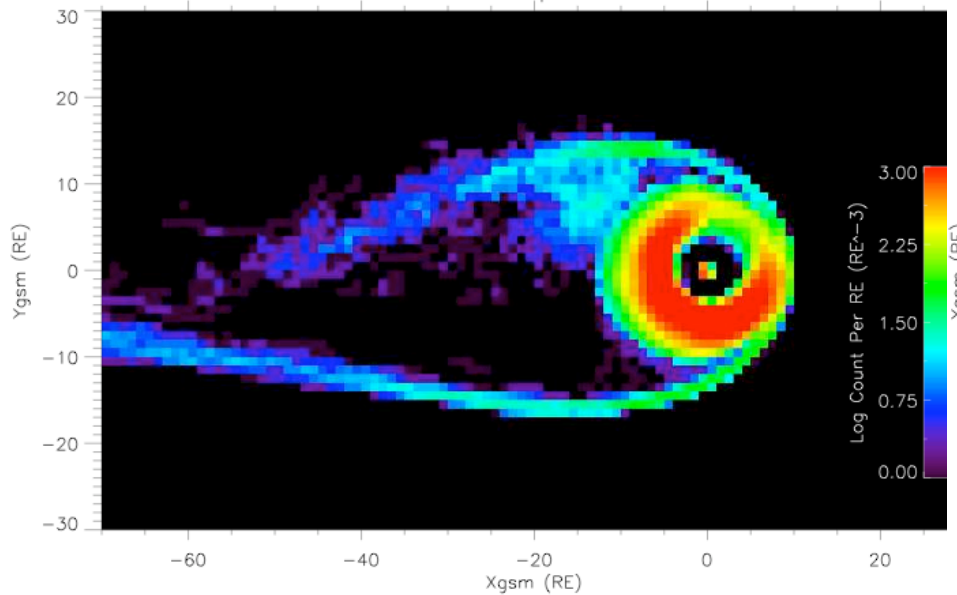
NBZ oxygen auroral wind, night particles
Y= 0 plane



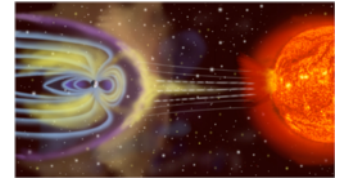
24 hr NBZ oxygen auroral wind, day particles
Y= 0 plane



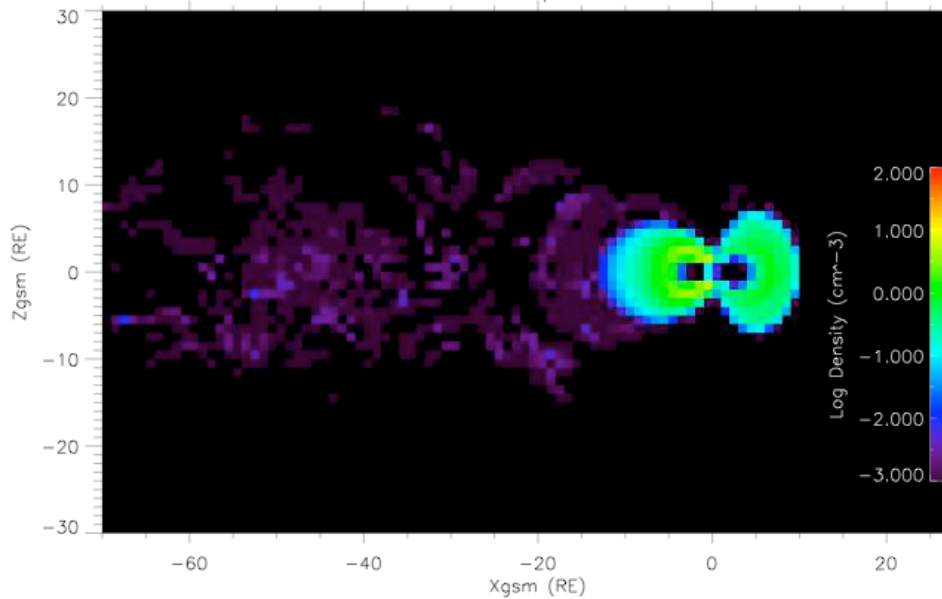
NBZ oxygen auroral wind, night particles
Z= 0 plane



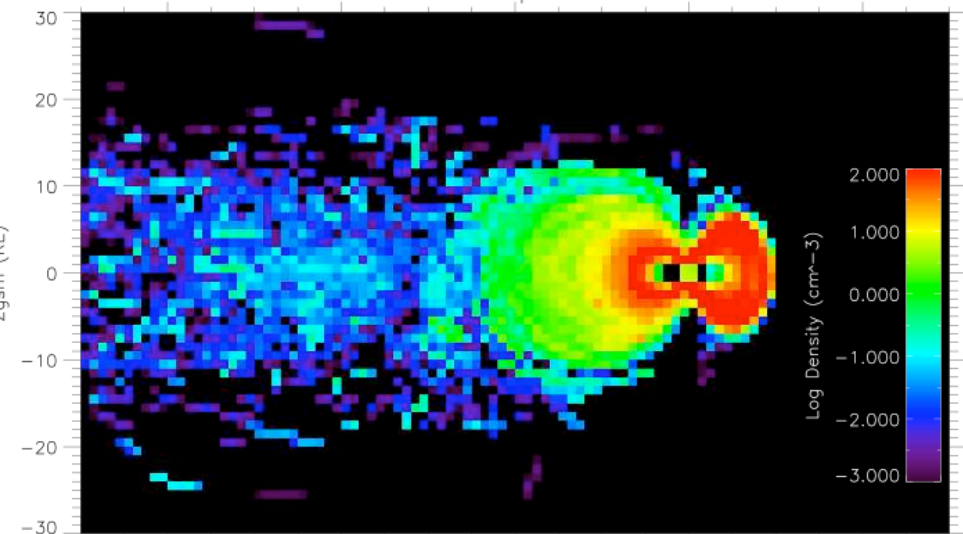
NBz Night / Day Release Density



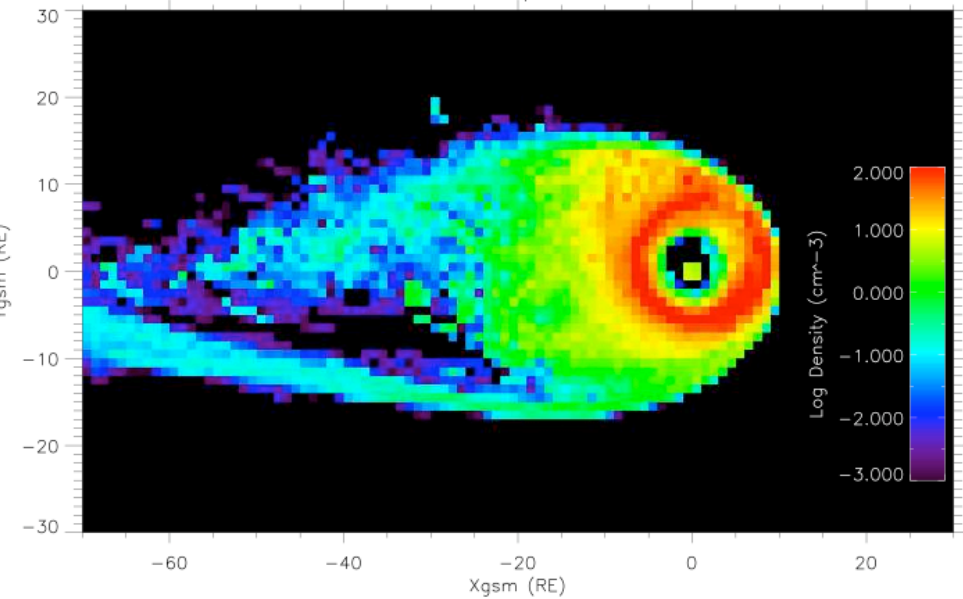
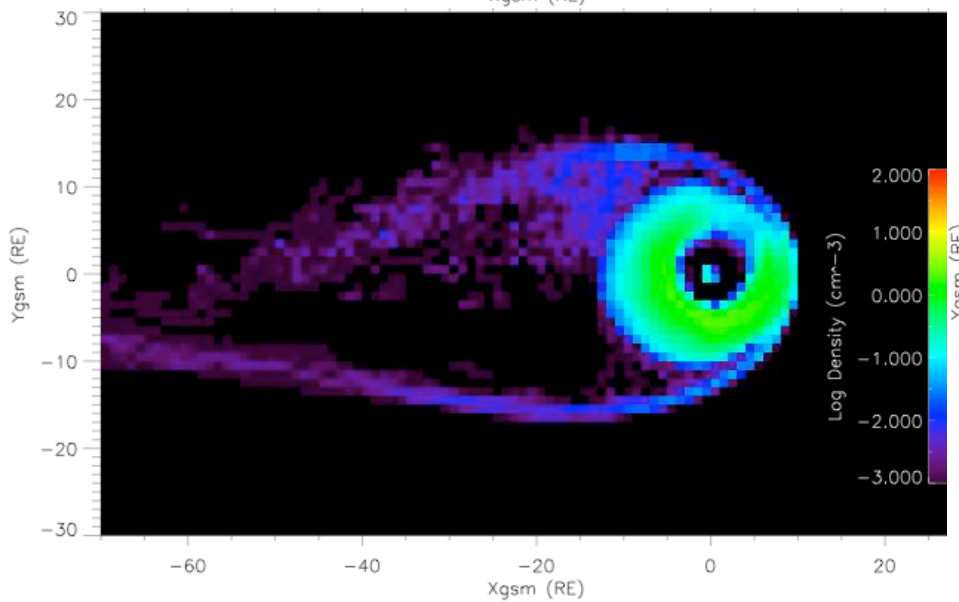
NBZ oxygen auroral wind, night particles
Y= 0 plane



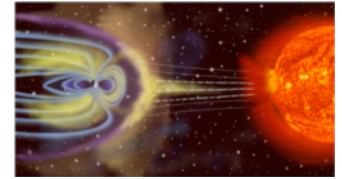
24 hr NBZ oxygen auroral wind, day particles
Y= 0 plane



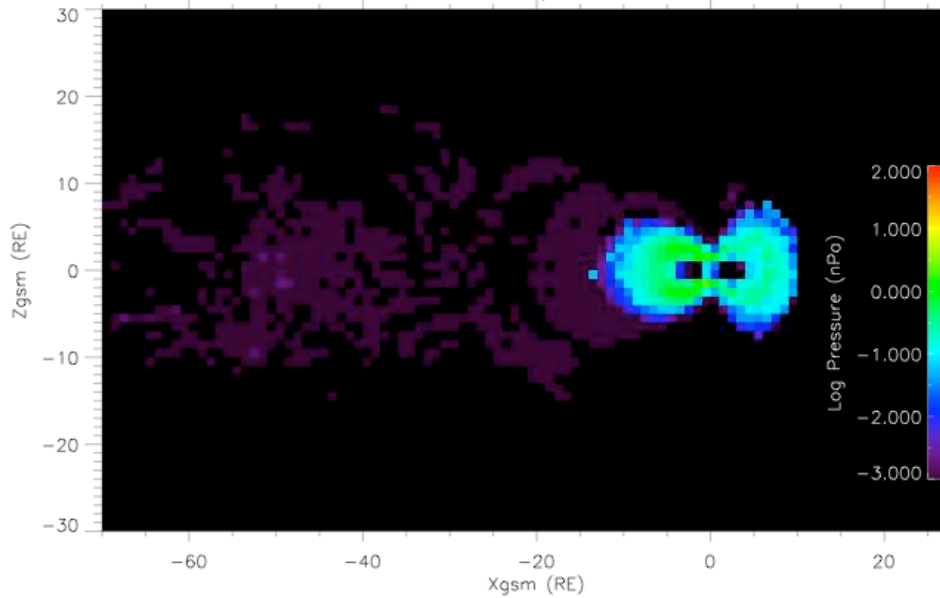
24 hr NBZ oxygen auroral wind, day particles
Z= 0 plane



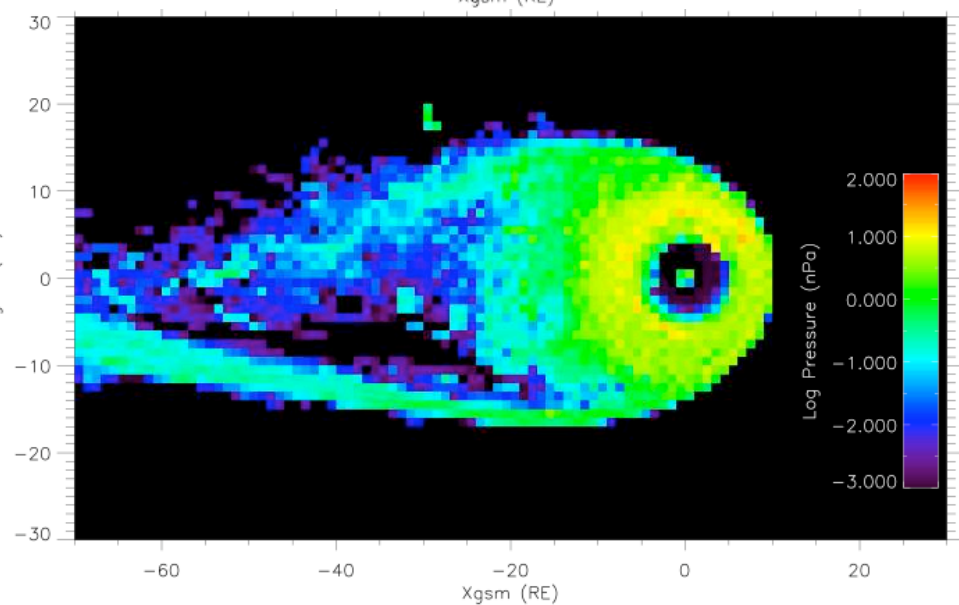
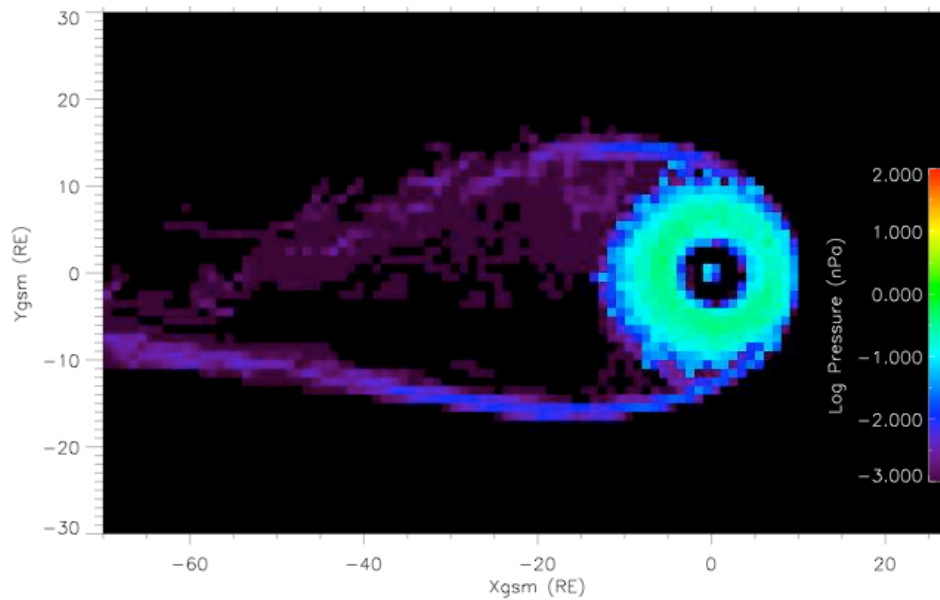
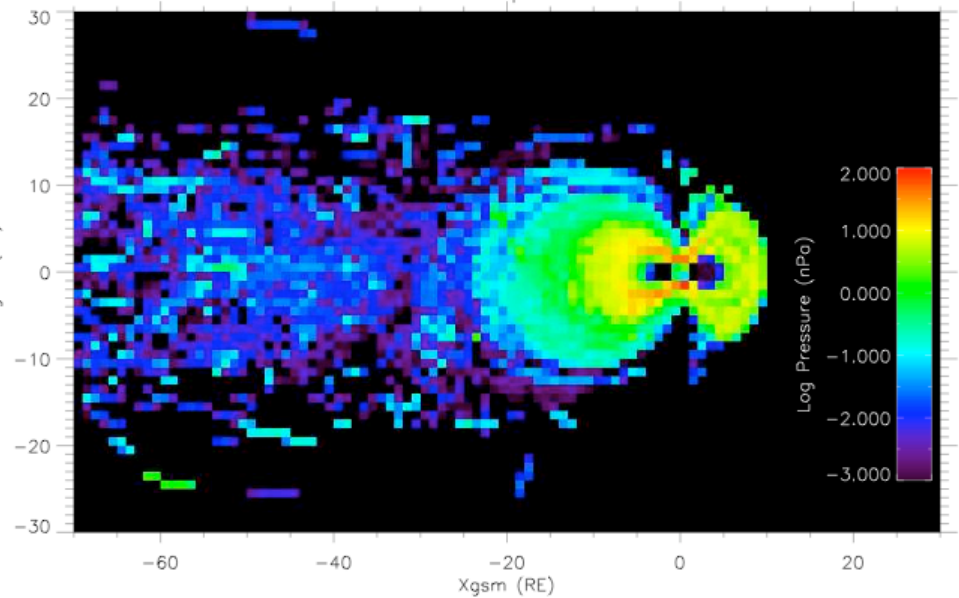
NBz Night / Day Release Pressure



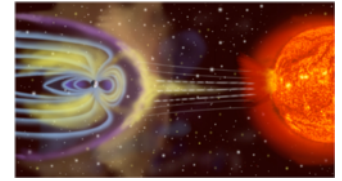
NBz oxygen auroral wind, night particles
Y= 0 plane



24 hr NBz oxygen auroral wind, day particles
Y= 0 plane



NBz Night / Day Release Pressure



- Little if any polar lobe flow with NBz
- Day source less dominant than in SBz case.

